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SPARE PARTS MASTER

CASIO

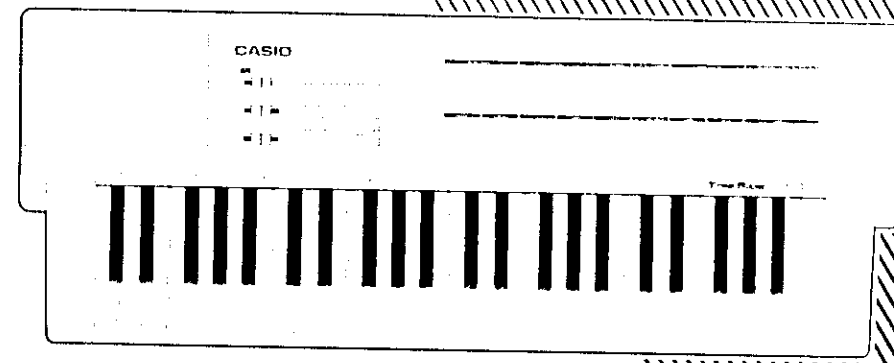
LONE BANK

CA-301/CA-401

ELECTRONIC MUSICAL INSTRUMENT
INSTRUMENTO MUSICAL ELECTRONICO

OPERATION MANUAL 2

MANUAL DE OPERACION 22



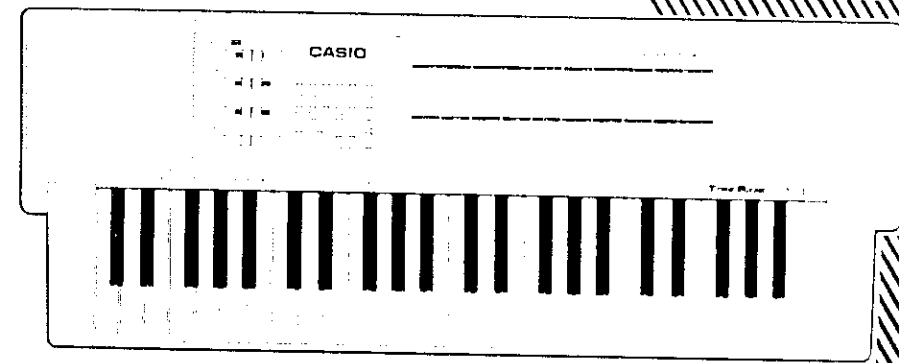


表 西

TONE BANK KEYBOARDS CA-301/CA-401

ELECTRONIC MUSICAL INSTRUMENT

Introduction

Your new CA-301/CA-401 keyboard is a state-of-the-art musical instrument which incorporates the latest electronics technology to make its operation as easy as possible. Exceptional sound quality backed up by a host of sophisticated features and functions makes this keyboard a joy to play for everyone.

In order to enjoy the features and functions of this unit to their fullest, be sure to carefully read this manual and follow the instructions contained herein.

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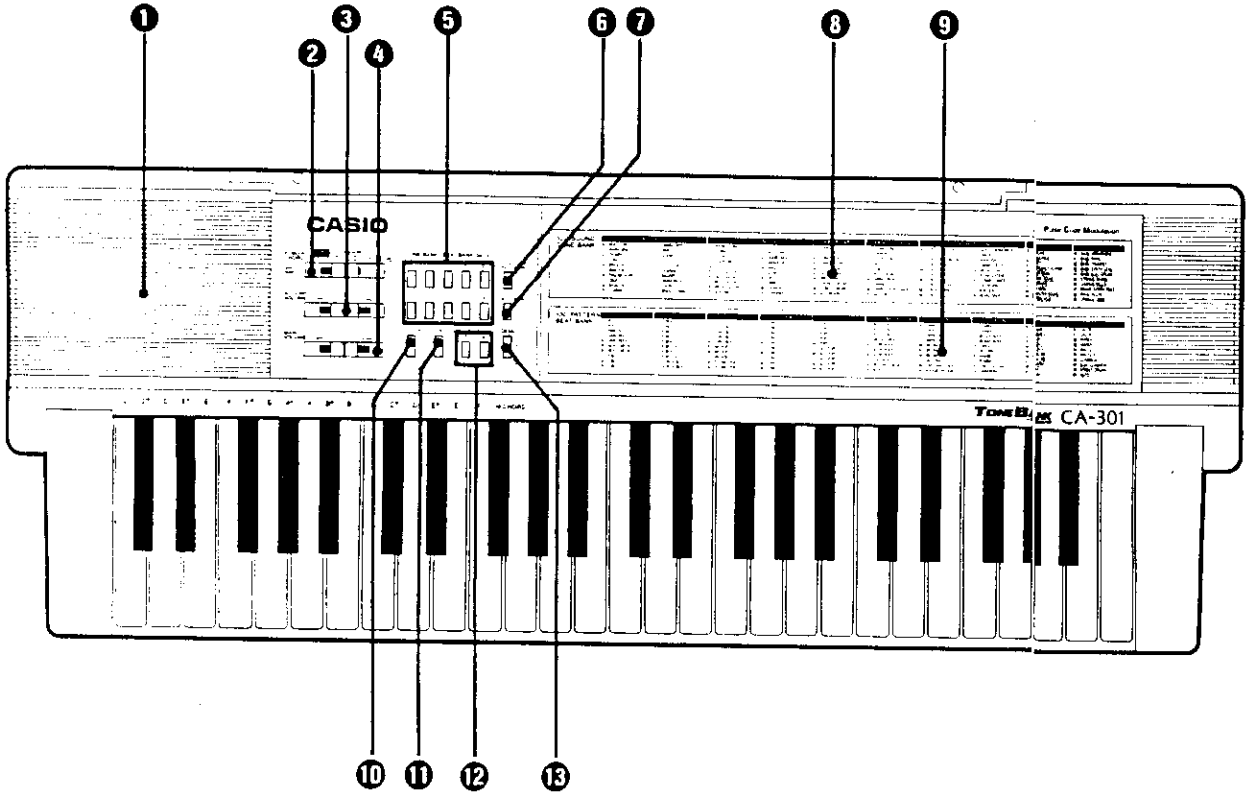
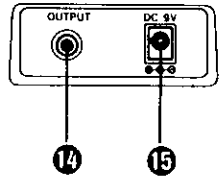
1 General Guide (CA-301)



[Rear panel]



⓮ Output jack
⓯ AC adaptor jack

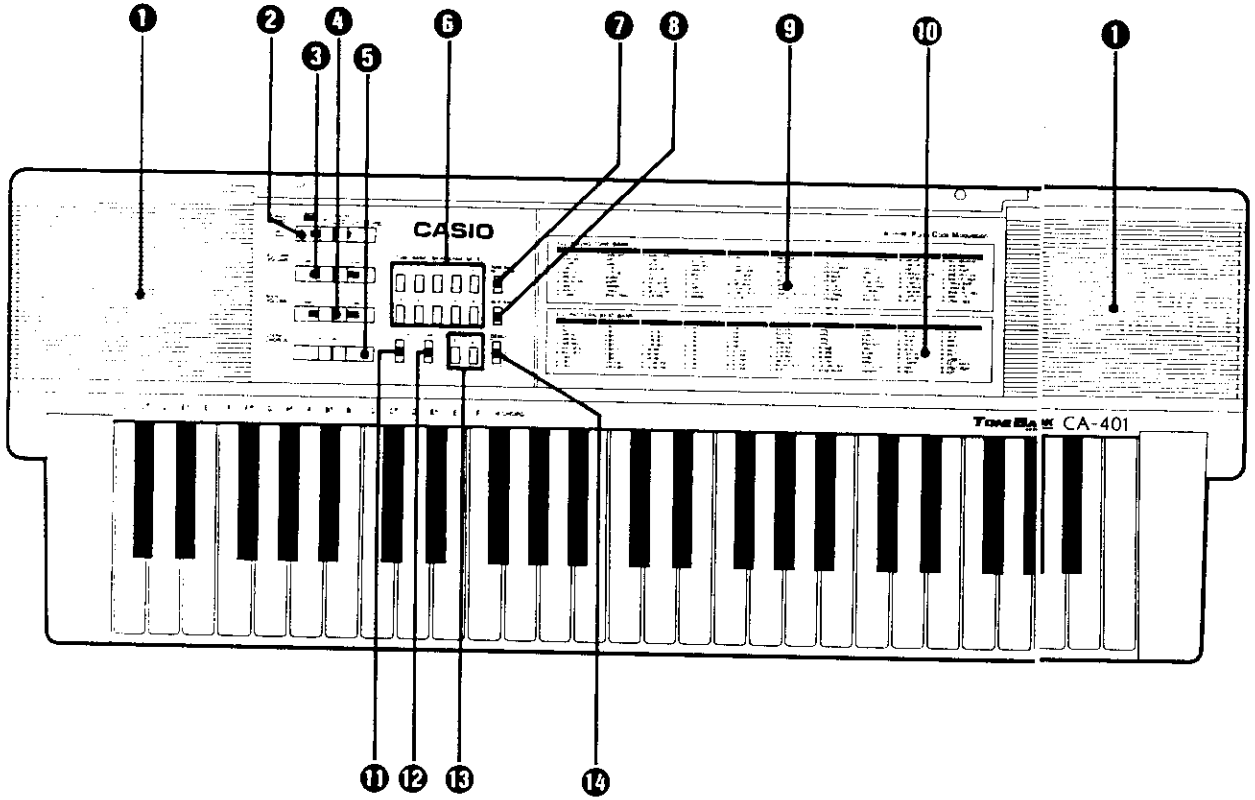
❶ Built-in speaker
❷ POWER/CHORD switch
❸ ACCOMP VOLUME slider
❹ MAIN VOLUME slider
❺ SELECT buttons
❻ TONE BANK button (POLY/TEXTURE button)
❼ BEAT BANK button
❽ 100 SOUND TONE BANK list
❾ 100 PATTERN BEAT BANK list
❿ FILL-IN button
⓫ START/STOP button
⓬ TEMPO control buttons
⓭ DEMO button

Demonstration Tune

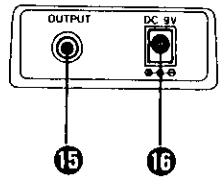
This unit features a preset demonstration tune which has been carefully programmed to showcase all the features and benefits of this unit. Simply press the DEMO button ⓭, and listen to the CA-301 plays itself!

* *The demonstration tune is played in an endless loop. Press the DEMO button again to stop the tune.*
* *The keyboard is inoperable while playing the demonstration tune.*

1 General Guide (CA-401)



[Rear panel]



⓯ Output jack
⓰ AC adaptor jack

❶ Built-in speakers
❷ POWER/CHORD switch
❸ ACCOMP VOLUME slider
❹ MAIN VOLUME slider
❺ STEREO CHORUS switch
❻ SELECT buttons
❼ TONE BANK button (POLY/TEXTURE button)
❽ BEAT BANK button
❾ 100 SOUND TONE BANK list
❿ 100 PATTERN BEAT BANK list
⓫ FILL-IN button
⓬ START/STOP button
⓭ TEMPO control buttons
⓮ DEMO button

Demonstration Tune

This unit features a preset demonstration tune which has been carefully programmed to showcase all the features and benefits of this unit. Simply press the DEMO button ⓮, and listen to the CA-401 plays itself!

* *The demonstration tune is played in an endless loop. Press the DEMO button again to stop the tune.*
* *The keyboard is inoperable while playing the demonstration tune.*

2 Power Supply

DC Power

★ Dry batteries

This unit can be powered by six D size (SUM-1/R20P) manganese dry cell batteries. Weakened batteries will result in lower volume or poor tonal quality. The power indicator lamp will gradually lose its brightness when battery power weakens. At this time, change batteries or shift to one of the alternate power sources mentioned below.

• **Battery replacement**

1. Open the battery compartment cover on the back of the unit and take out used batteries.
2. Load new batteries taking care that polarity is correct.

* *It is advisable to replace all six batteries at the same time for longer battery life.*
* *Standard battery life is approximately 8 hours.*

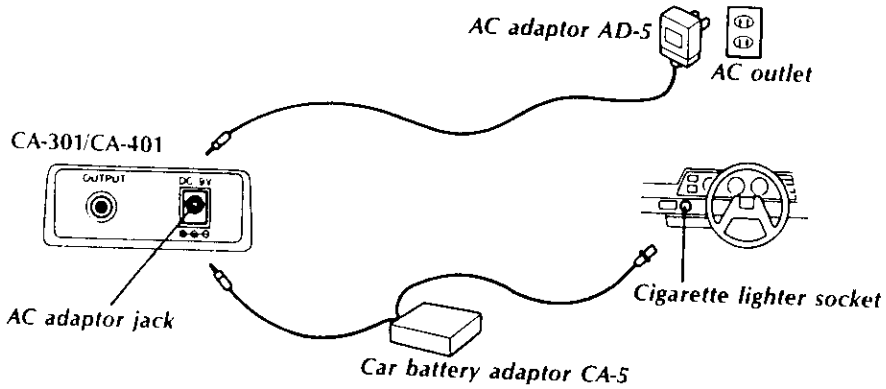
★ Car battery

With the car battery adaptor (CA-5, optional), DC power is supplied from a car battery through the cigarette lighter socket.

• *Car battery adaptor may not be available in some areas.*

AC Power

An AC adaptor (AD-5, optional) is required when using household current. Use only a genuine CASIO adaptor with the same voltage rating (100, 117, 220, or 240) as the power supply in your area to prevent component damage. Plug the AC adaptor into the AC outlet and the cord into the unit. This will automatically cut off the battery power supply.



* Use only genuine CASIO adaptors to avoid risk of damage.
* The adaptor may become warm when left connected to an outlet. This is normal, but the adaptor should be disconnected when not in use.

PRECAUTIONS

Incorrectly using batteries can cause leakage or bursts, and may damage your product. Note the following precautions:

* Be sure that ± polarity is correct.
* Do not mix battery types.
* Do not mix new batteries with old ones.
* Never leave dead batteries in battery compartment as they may cause malfunctions.
* Remove batteries when not using the product for extended period.
* The supplied batteries are not rechargeable.
* Do not expose the battery to direct heat, let it become shorted or try to take it apart.

(If a battery leaks, clean out the battery compartment of the product immediately, taking care to avoid letting the battery fluid come into direct contact with your skin.)

3 General Operation

* *Refer to the general guide found on page 4-5 (CA-301)/6-7 (CA-401) for exact locations of this keyboard controls and connections.*

① Set the POWER/CHORD switch to ON.
② Adjust the volume level.
③ Select one of 100 preset tones (see "Preset Tones", page 10).
④ Now, start playing.

4 Preset Tones

** Refer to the general guide found on page 4-5 (CA-301)/6-7 (CA-401) for exact locations of this keyboard controls and connections.*

■ To select a preset tone

There are 100 preset tones to choose from. Each tone has a 2-digit number. To select a preset tone, find its preset tone number in the 100 SOUND TONE BANK list on the keyboard's top panel, and enter the number using the SELECT button.

** "BRASS ENS" tone (No. 00) is selected automatically whenever you switch the power of the keyboard ON.*

Example

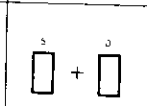
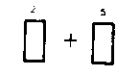
To select "ELEC GUITAR" (No. 25) after selecting "VIBRAPHONE" (No. 50).

1 Set the POWER/CHORD switch to the ON position. At this time "BRASS ENS" (No. 00) is selected automatically.

2 Press TONE BANK button.

3 Press SELECT button "5" and then "0" to select "VIBRAPHONE".

4 Press SELECT button "2" and then "5" to select "ELEC GUITAR".

Step	Press	Selected tone
1		No. 00 BRASS ENS
2		
3		No. 50 VIBRAPHONE
4		No. 25 ELEC GUITAR

You can also change the selected tone by pressing only one SELECT button. Note the following:

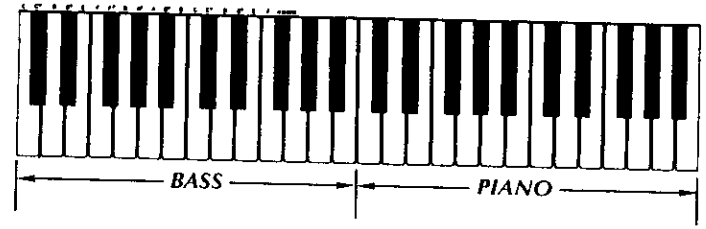
Selected tone →	Press →	Newly selected tone
No. 50	0	No. 00
No. 00	2	No. 02
No. 02	5	No. 25

■ Keyboard split tones

Some Tone Bank selection split the keyboard and assign two or four sounds to keyboard. Then, the sound produced depends on what position of the keyboard you play. For example, BASS/PIANO (No. 91) puts BASS on the left and PIANO on the right of the keyboard.

Example

"BASS/PIANO" (No. 91)



■ Stereo chorus effect (CA-401)

Set the STEREO CHORUS switch to "ON" position to get a stereo chorus effect. This effect causes sound to move between the two speakers for greatly enhanced stereo effect.

■ POLY/TEXTURE button

The TONE BANK button also functions as a POLY/TEXTURE button. Once you select a tone, each press of this button switches both the texture of the tone (between thin and thick), and the polyphony of the tone (between 4 and 8).

5 Auto-rhythms

** Refer to the general guide found on page 4-5 (CA-301)/6-7 (CA-401) for exact locations of this keyboard controls and connections.*

■ To select an auto-rhythm

There are 100 auto-rhythms to choose from. Each rhythm has a 2-digit number. To select an auto-rhythm, find its rhythm number in the 100 PATTERN BEAT BANK list on the keyboard's top panel, and enter the number using the SELECT button.

** "ROCK 1" rhythm (No. 00) is selected automatically whenever you switch the power of the keyboard ON.*

Example

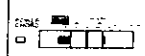
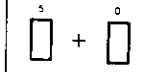
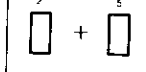
To select "HIP HOP 1" (No. 25) after selecting "ROCK'N'ROLL 1" (No. 50).

1 Set the POWER/CHORD switch to the ON position. At this time "ROCK 1" (No. 00) is selected automatically.

2 Press BEAT BANK button.

3 Press SELECT button "5" and then "0" to select "ROCK'N'ROLL 1".

4 Press SELECT button "2" and then "5" to select "HIP HOP 1".

Step	Press	Selected rhythm
1		No. 00 ROCK 1
2		
3		No. 50 ROCK'N'ROLL 1
4		No. 25 HIP HOP 1

You can also change the selected rhythm by pressing only one SELECT button. Note the following:

Selected rhythm →	Press →	Newly selected rhythm
No. 50	0	No. 00
No. 00	2	No. 02
No. 02	5	No. 25

■ To play an auto-rhythm

① After selecting an auto-rhythm, press START/STOP button to start the rhythm.
② Adjust the tempo using the TEMPO control buttons. Each press of ▲ speeds up the tempo, while pressing ▼ slows it down.
** Tempo of the auto-rhythm can be adjusted between 40 and 256 beats per minute.*
③ You can adjust the relative volume of the rhythm by using the ACCOMP VOLUME slider.
④ Press START/STOP button again to stop auto-rhythm play.

■ Using FILL-IN button

When FILL-IN button is pressed during auto-rhythm play, an appropriate fill-in pattern is inserted in the rhythm pattern. If the button is held down, the fill-in pattern is repeated until the end of the measure during which the button is released.

NOTE:

- When playing an auto-rhythm, the polyphony of each preset tone is limited as listed below;

Tone No. 06, 07, 08, 09, 12, 13, 15, 16, 22, 24, 26, 40, 42, 44, 46, 50, 91, 94, 98	6-note polyphonic
Other tones	3-note polyphonic

** You can switch the polyphony of the tone between 3 and 6 using POLY/TEXTURE button when playing an auto-rhythm (see page 11).*

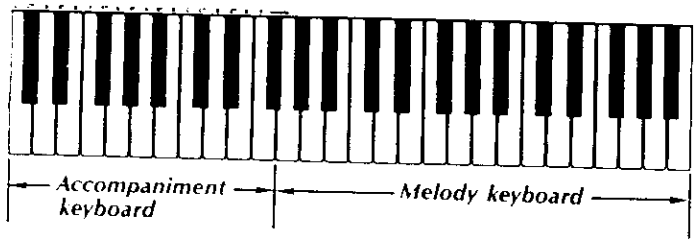
6 Auto-accompaniment

** Refer to the general guide found on page 4-5 (CA-301)/6-7 (CA-401) for exact locations of this keyboard controls and connections.*

This unit features 100 accompaniment patterns that let you add full accompaniments to your performances automatically.
You can select from two types of auto-accompaniment—simplified fingering chord play (CASIO CHORD ON) or standard fingering (FINGERED).

■ Accompaniment keyboard

If the POWER/CHORD switch is set to "CASIO CHORD ON" or "FINGERED", the lower 1.5 octave of the keyboard become accompaniment keyboard keys.



■ Using auto-accompaniment

[1] Auto-accompaniment using the Casio Chord system.

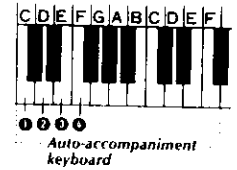
1. Set the POWER/CHORD switch to "CASIO CHORD ON" position.
2. Select one of the auto-rhythms (refer to "To select an auto-rhythm" on page 12).
3. Play on the accompaniment keyboard keys according to the Casio Chord system (refer to "Casio Chord system" on page 15).
4. Press START/STOP button to stop auto-accompaniment play.

Casio Chord system

The Casio Chord system has been developed so you can play the four main types of chords more easily. Playing of the chords is simplified as shown below:

- Pressing one of the accompaniment keyboard keys produces a major chord corresponding to that note.
- Simultaneously pressing any key to the right (two keys at the same time) results in a minor chord.
- Similarly, pressing one more key to the right (three keys in all) produces a seventh chord, and pressing the fourth key to the right (four keys in all) creates a minor seventh chord.

<Examples>
C (C major chord)—Press ❶.
Cm (C minor chord)—Press ❶, ❷ together.
C_7 (C seventh chord)—Press ❶, ❷, ❸ together.
C_{m7} (C minor seventh chord)—Press ❶, ❷, ❸, ❹ together.



** Not only ❷, ❸, and ❹, but any black or white keys can be used as long as they are to the right of ❶.*

[2] Auto-accompaniment play using standard chord fingering.

① Set the POWER/CHORD switch to "FINGERED" position.
② Select one of the auto-rhythms (refer to "To select an auto-rhythm" on page 12).
③ Play a chord on the accompaniment keyboard keys.
** This unit is capable of recognizing the following chords: M, m, −5, +5, dim, sus4, 7, M7, m7, mM7, m7-5, 7sus4, 9, m9.*
④ Press START/STOP button to stop auto-accompaniment play.

NOTES:

- You can adjust the relative volume of the auto-accompaniment by using the ACCOMP VOLUME slider.
- You can adjust the tempo of the auto-accompaniment by using the TEMPO control buttons.
- During auto-accompaniment performance, chord played on the accompaniment keyboard will continue to sound after releasing the keys.

- When playing an auto-accompaniment, the polyphony of each preset tone is limited as listed below;

Tone No. 06, 07, 08, 09, 12, 13, 15, 16, 22, 24, 26, 40, 42, 44, 46, 50, 91, 94, 98	2-note polyphonic
Other tones	monophonic

* *You can switch the polyphony of the tone between 1 and 2 using POLY/TEXTURE button when playing an auto-accompaniment (see page 11).*

7 Troubleshooting

For any malfunction, always check battery condition first. (see page 8)

Trouble	Possible Cause	Remedy
No sound, even if keys are pressed.	1. Main volume turned down. 2. Headphones connected.	1. Turn up main volume. 2. Disconnect headphones.
No rhythm. **No accompaniment.**	Main and accompaniment volume turned down.	Turn up main and accompaniment volume.
Occasional interference.	Refrigerators, washing machines and similar electric appliances.	Use outlet as far away as possible from appliance thought to be the cause.
No sound when connected to external amplifier.	1. Main volume turned down. 2. Defective connection cord.	1. Turn up main volume. 2. Replace connection cord.

8 Care of Your Keyboard

1. **Avoid heat, humidity, and direct sunlight.**
   Do not overexpose the unit to direct sunlight, place it near a heater, or in any area subject to high temperature.

2. **Avoid severe impacts and not drop.**
   Severe impacts can result in malfunction. When carrying or transportion the unit, protect the keyboard and keys by packing with soft cloth.

3. **Keep the unit free of liquids, dust, particles, etc.**
   Do not allow foreign matter to enter between the keys. Be especially careful of metallic objects such as hairpins, sewing needles or coins. Also, do not allow the unit to get wet.

4. **Never attempt to modify any part of the unit.**
   Your keyboard is a precision musical instrument made up of sophisticated electronic parts. Any modification of, or tampering with internal components can cause trouble or malfunction.

5. **Do not use lacquer thinner or similar chemicals for cleaning.**
   Clean the keyboard with a soft cloth dampened with a mild detergent solution and squeeze it until almost dry.

6. **Remove batteries before extended storage.**
   Batteries left in the unit for long periods can leak and cause damage to electronic circuitry.

7. **In case of malfunction . . .**
   Check whether buttons and connections are set correctly as indicated in the troubleshooting chart. If the unit still does not work properly, contact the original retailer or a nearby dealer. Never attempt to repair the unit yourself. This can result in serious damage of the components.

9 Specifications

Model:	CA-301/CA-401
Number of keys:	49 keys
Polyphonic:	8-note polyphonic (maximum)
Preset tones:	100
Auto-rhythms:	100
Auto-accompaniment function:	CASIO CHORD ON/FINGERED
Effect:	Stereo chorus (CA-401)
Terminals:	Output jack [output impedance: 100Ω, output voltage: 2.5 V (CA-301)/3 V (CA-401) (RMS) MAX], AC adaptor jack (DC 9V)
Built-in speakers:	12 cm dia (CA-301)/12 cm dia × 2 (CA-401)
Power source:	3-way AC/CD power source; • AC: 100, 117, 220, 240V (±10V), 50/60 Hz, with optional AD-5 AC adaptor • DC: 6 D size (SUM-1/R20P) manganese dry batteries Battery life: Approximately 8 hours • Car battery: Requires optional CA-5 car adaptor
Power consumption:	7.7W (CA-301)/6.3W (CA-401)
Dimensions:	820(W) × 301(D) × 93(H) mm 32 5/16"(W) × 11 7/8"(D) × 3 11/16"(H)
Weight:	CA-301; 3.8 kg (8.4 lbs) including batteries CA-401; 4.2 kg (9.3 lbs) including batteries
Standard accessories:	6 "D" size batteries, dust cover, score stand

* *Designs and specifications are subject to change without notice.*

GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THE UNIT IN THE U.S.A.
(not applicable to other areas).

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

..... reorient the receiving antenna
..... relocate the equipment with respect to the receiver
..... move the equipment away from the receiver
..... plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.